

yn



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/832,610

04/11/2001

Zhun Zhong

US010138

4527

24737

7590

01/25/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

DIEP, NHON THANH

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,610

Applicant(s)

ZHONG, ZHUN

Examiner

Nhon T Diep

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-21 and 23-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-21, 23-46 is/are allowed.
- 6) ☒ Claim(s) 1, 4-12 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 8-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4-7 are dependent upon a canceled claim (claim 3) and therefore, claims 4-7 are rejected as being indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7-9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hui et al (US 5,488,41), cited in the previous Office Action.

Hui et al discloses a video compression coding and decoding with automatic sub-pixel frame/field motion compensation comprising the same method for applying proper interpolation for motion compensation in a video data stream, the method comprising the steps of: determining a likely local nature of a reference frame data area

in the video data stream; and applying proper interpolation to the reference frame data area according to the determined likely local nature of the reference frame data area (fig. 4, el. 40, 43, 42, 44, 49), further comprising the step of evaluating the video data stream to determine whether the video data stream was encoded using field motion compensation or frame motion compensation (col. 9, ln. 49 – col. 10, ln. 18) as specified in claim 1; wherein the step of evaluating the video data stream to determine whether the video data stream was encoded using field motion compensation or frame motion compensation results in a determination that the video data stream was encoded using frame motion compensation and that encoding determined for decoding to fetch the reference frame data area starting from a pixel position, wherein the step of determining a likely local nature of a reference frame data area in the video data stream is unable to reliably determine (is treated as moving area for better image quality) that the likely local nature of the reference frame data area comprises a stationary area, and wherein the step of applying proper interpolation to the reference frame data area according to the determined likely local nature of the reference frame data area comprises applying field-based interpolation to the reference frame data area (at the encoding side, the absolute value is compared to the threshold and if it is greater than threshold, selecting field based interpolation for that block and again at the decoding side, the same block that were field-based interpolated will be field based interpolated because the same absolute value will be compared to the threshold again) as specified in claims 7 and 9; wherein the step of determining a likely local nature of a reference frame data area in the video data stream is unable to reliably determine that the likely local nature of the

Art Unit: 2613

reference frame data area comprises a stationary area (col. 4, ln. 54), and wherein the step of applying proper interpolation to the reference frame data area in the video stream results in a determination that the local nature of the reference frame data area in the video stream likely comprises a stationary area, and wherein the step of applying proper interpolation to the reference frame data area applying frame-based interpolation to the reference frame data area (col. 4, ln. 67 – col. 5, ln. 3) as specified in claim 8; and the method is for applying proper interpolation for reduced resolution motion compensation in the video data stream (col. 4, ln. 47 – col. 5, ln. 5) as specified in claim 12.

6. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hui et al, in view of Richard, III et al (US 5,790,174), cited in the previous Office Action.

As applied to claim 1 above, it is noted that Hui et al although discloses a MPEG encoding and decoding system, does not particularly disclose “determining dynamically real time a likely local nature...”. address the real time nature as claimed. Richard et al teaches that for compression technique using Motion Estimation, Motion-Compensation Predictive Coding and Adaptive Discrete Cosine Transform (DCT) quantization is supported by the International Standards Organization (ISO) Moving Pictures Expert Group (MPEG). MPEG-1 specifies a video coding algorithm having a data rate of 1.2 MBPS. This digital-video and digital-audio compression standard can be accommodated by a T-1 line or a D-1 channel to provide full-motion video within the 1.544 MBPS data channel provided by an ADSL to the subscriber premises. MPEG programmable decoder/processors, capable of decompressing digital video in real time,

Art Unit: 2613

have been produced by such companies as C-Cube Microsystems and LSI of San Jose, Calif. These or equivalent devices are incorporated into decoders 106 and 126 shown in FIG. 2 to generate standard NTSC analog video and analog audio signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the system of Hui et al is fully capable of processing digital signal such as determining the dynamically likely local nature of a reference frame in real time.

Allowable Subject Matter

7. Claims 13-21, 23-46 allowed.

8. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2613

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T Diep whose telephone number is 703-305-4648. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on 703 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ND
25 June 2004



NHON DIEP
PRIMARY EXAMINER